
EXHIBIT A

ISHWARA BHAT

Professor of Electrical, Computer and Systems Engineering Department
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(a) Professional Preparation

IIT	Madras, India	Electrical Engineering	B. Tech June 1980
Rensselaer	Troy, NY	Electrical Engineering	M.S. December 1981
Rensselaer	Troy, NY	Electrical Engineering	Ph.D. May 1985
Rensselaer	Troy, NY	Electrical Engineering	Research Associate 1985-88

(b) Appointments

1999-	Professor, Electrical, Computer and Systems Engineering Department Rensselaer Polytechnic Institute, Troy, New York.
1991-1999	Associate Professor, Rensselaer Polytechnic Institute.
1988-1991	Research Assistant Professor, Rensselaer Polytechnic Institute.

(c) Honors and Awards

Recipient of Rensselaer Engineering Research Team Award, 2011;
 Recipient of Rensselaer Engineering Research Excellence Award for 2009,
 Recipient of Best Paper Award at MSS Symposium, 2005
 Allen B. Dumont Prize for Outstanding Graduate Academic Achievement

(d) Outputs**Selected Publications (Over 200 refereed journal publications)**

- Chapter title “ GaN Material Properties” in “Wide Band Gap Semiconductor Power Devices and their Applications” Elsevier, Editor: Jayanth Baliga, 2017
- Dibyajyoti Mohanty, Xin Sun, Zonghuan Lu, Morris Washington, Gwo-Ching Wang, Toh-Ming Lu, and Ishwara B. Bhat, “Analyses of orientational superlattice domains in epitaxial ZnTe thin films grown on graphene and mica”, Journal of Applied Physics, 124, 175301 (2018)
- Jia-Woei Wu, Adam Weltz, Machhindra Koirala, James J.-Q. Lu, Rajendra Dahal, Yaron Danon, and Ishwara B. Bhat, “Boron-10 nanoparticles filled silicon trenches for thermal neutron detection application”, Applied Physics Letters, 110, 192105, (2017)
- K. Ahmed, R. Dahal, A. Weltz, J.-Q. Lu, Y. Danon and I. B. Bhat, “Solid-state neutron detectors based on thickness scalable hexagonal boron nitride”, Applied Physics Letters, 023503, (2017)
- S. Chowdhury, C. Hitchcock, R. Dahal, I. B. Bhat and T. P. Chow, “Current-Controlled Negative Resistance (CCNR) in High-Voltage 4H-SiC PiN Rectifiers" IEEE Transactions on Electron Devices, Vol. 64, NO. 3, March, pp897-900, 2017
- Banerjee, Sneha, Rajendra Dahal, and Ishwara Bhat. "Low Temperature Metalorganic Chemical Vapor Deposition of Semiconductor Thin Films for Surface Passivation of Photovoltaic Devices." MRS Advances (2016)
- S. Chowdhury, C. Hitchcock, R. Dahal, Z. Stum, I. B. Bhat and T. P. Chow, “4H-SiC n-channel Insulated Gate Bipolar Transistors on (0001) and (000-1) Oriented Free-standing n- Substrates", IEEE Elec. Dev. Lett., vol. 37, pp. 317-320, Mar. 2016.
- Sauvik Chowdhury, Collin Hitchcock, Zachary Stum, Rajendra P. Dahal, Ishwara B. Bhat, T. Paul Chow, “Experimental Demonstration of High-Voltage 4H-SiC Bi-Directional IGBTs”, IEEE Electron Device Letters 37, 1033-1036 (2016).

- S. Chowdhury, C. Hitchcock, R. Dahal, I. B. Bhat and T. P. Chow, "Current-Controlled Negative Resistance (CCNR) in High-Voltage 4H-SiC PiN Rectifiers" revised version submitted, IEEE Elec. Dev. Lett. 2016.
- Peng-Yu Su, Chungho Lee, Gwo-Ching Wang, Toh-Ming Lu and Ishwara B. Bhat, "CdTe/ZnTe/GaAs Heterostructure for Single Crystal CdTe Solar Cells", Journal of Electronic Materials, Vol. 43, No. 8, 2014
- R. Dahal, K. C. Huang, J. Clinton, N. LiCausi, J.-Q. Lu, Y. Danon, I. Bhat, "Self-powered micro-structured solid state neutron detector with very low leakage current and high efficiency", Applied Physics Letters 100, 243507 (2012).

Patents

- Rajendra Dahal, Yaron Danon, James Lu and Ishwara Bhat, "Neutron-detecting apparatuses and methods of fabrication", Patent number: 9406833, Filed: September 10, 2015, Date of Patent: August 2, 2016.
- R. Dahal, I. Bhat and T. P. Chow, "Selective, Electrochemical Etching Of a Semiconductor and Applications thereof", Int. patent application filed 2/10/2015
- Rajendra Dahal, Yaron Danon, James Lu and Ishwara Bhat, "Fabrication of high aspect ratio holes in Si(110) with perfectly vertical wall for solid state thermal neutron detection applications", provisional patent filed on 06/17/2015
- Rajendra Dahal, Yaron Danon, James Lu and Ishwara Bhat, "Radiation-Detecting Structures and Fabrication Methods thereof", Full patent filed on June 23, 2015

(e) Synergistic Activities

Professional activities

Associate Editor, Crystal Growth Section, *Journal of Electronic Materials*;
Co-Chair, 2000, 2005, 2008, 2012 and 2016 II-VI workshop;
Program committee, II-VI workshop, 1994-2022;
Organizer of Special Session on SiC, AACG conference, 2001;
Organizer of special sessions for EMC conferences,
Member of the Program Committee of the ninth ICMOVPE, 1997-98;
Proceedings Editor, 1994-1999 US workshop on HgCdTe and related materials;
NSF panel review for many years and others.

Teaching and Educational Human Resource Development

Prof. Bhat has developed a sophomore level studio-based semiconductor device physics course taken by all entering electrical engineering students. Introduction of this course resulted in a significant increase in the number of entering microelectronic students in the department. He also introduced both hands-on lab activities as well as simulation software in the undergraduate and graduate level IC processing course. He has been very active in outreach activities over the years by teaching clean room processing to over 50 high school students and also trained over 50 students as undergraduate research projects. He has graduated 22 PhD students and 19 Masters Students. In 2014 summer, he gave a two-week IC processing course to over 10 interns from Global Foundries (a leading full-service semiconductor company with 18,000 employees with 14 locations across the globe).

Published work and invited talks

Prof. Bhat has published over 200 refereed journal articles and presented in over 100 conferences, both contributed and invited over the last 35 years. He has also submitted 5 patents during the last five years. Additional details are available at

<https://scholar.google.com/citations?user=Mav8sKUAAAAJ&hl=en&oi=ao>